Acetone CMOS





Material No.: 9005-68 Batch No.: 0000027893 Manufactured Date: 2012/11/18 Retest Date: 2017/11/17

Certificate of Analysis

| Test | Specification | Result |
|---|---------------|--------|
| Assay ((CH3)2CO) (by GC, corrected for water) | >= 99.5 % | 99.9 |
| Color (APHA) | <= 10 | <5 |
| Residue after Evaporation | <= 5 ppm | <1 |
| Titrable Acid (µeq/g) | <= 0.3 | 0.3 |
| Titrable Base (µeq/g) | <= 0.5 | <0.1 |
| Water (H2O) | <= 0.5 % | <0.1 |
| Solubility in H2O | Passes Test | РТ |
| Chloride (Cl) | <= 0.2 ppm | <0.1 |
| Phosphate (PO4) | <= 0.05 ppm | < 0.05 |
| Trace Impurities – Aluminum (Al) | <= 50.0 ppb | < 5.0 |
| Arsenic and Antimony (as As) | <= 5 ppb | < 5 |
| Trace Impurities – Barium (Ba) | <= 20.0 ppb | < 1.0 |
| Trace Impurities – Beryllium (Be) | <= 10.0 ppb | < 1.0 |
| Trace Impurities – Bismuth (Bi) | <= 20.0 ppb | < 10.0 |
| Trace Impurities – Boron (B) | <= 10.0 ppb | < 5.0 |
| Trace Impurities – Cadmium (Cd) | <= 10.0 ppb | < 1.0 |
| Trace Impurities – Calcium (Ca) | <= 25.0 ppb | < 1.0 |
| Trace Impurities – Chromium (Cr) | <= 10.0 ppb | < 1.0 |
| Trace Impurities – Cobalt (Co) | <= 10.0 ppb | < 1.0 |
| Trace Impurities – Copper (Cu) | <= 10.0 ppb | < 1.0 |
| Trace Impurities – Gallium (Ga) | <= 10.0 ppb | < 1.0 |
| Trace Impurities – Germanium (Ge) | <= 10.0 ppb | < 10.0 |
| Trace Impurities – Gold (Au) | <= 20.0 ppb | < 5.0 |
| Trace Impurities – Iron (Fe) | <= 20.0 ppb | < 1.0 |

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600 Avantor ™ Performance Materials Inc.

3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

| Test | Specification | Result |
|---|---------------|--------|
| Trace Impurities - Lead (Pb) | <= 10.0 ppb | < 10.0 |
| Trace Impurities – Lithium (Li) | <= 10.0 ppb | < 1.0 |
| Trace Impurities – Magnesium (Mg) | <= 20.0 ppb | < 1.0 |
| Trace Impurities – Manganese (Mn) | <= 10.0 ppb | < 1.0 |
| Trace Impurities – Molybdenum (Mo) | <= 10.0 ppb | < 5.0 |
| Trace Impurities – Nickel (Ni) | <= 10.0 ppb | < 5.0 |
| Trace Impurities – Niobium (Nb) | <= 50.0 ppb | < 1.0 |
| Trace Impurities – Potassium (K) | <= 10.0 ppb | < 10.0 |
| Trace Impurities – Silicon (Si) | <= 50.0 ppb | < 10.0 |
| Trace Impurities – Silver (Ag) | <= 10.0 ppb | < 1.0 |
| Trace Impurities – Sodium (Na) | <= 10.0 ppb | < 5.0 |
| Trace Impurities – Strontium (Sr) | <= 10.0 ppb | < 1.0 |
| Trace Impurities – Tantalum (Ta) | <= 50.0 ppb | < 5.0 |
| Trace Impurities – Thallium (TI) | <= 10.0 ppb | < 5.0 |
| Trace Impurities – Tin (Sn) | <= 20.0 ppb | < 10.0 |
| Trace Impurities – Titanium (Ti) | <= 10.0 ppb | < 1.0 |
| Trace Impurities – Vanadium (V) | <= 10.0 ppb | < 1.0 |
| Trace Impurities – Zinc (Zn) | <= 20.0 ppb | < 1.0 |
| Trace Impurities – Zirconium (Zr) | <= 10.0 ppb | < 1.0 |
| Particle Count – 0.5 µm and greater (Rion KS42AF) | <= 100 par/ml | 2 |
| Particle Count – 1.0 µm and greater (Rion KS42AF) | <= 8 par/ml | <1 |

For Microelectronic Use

| Country of Origin: | US |
|--------------------|--------------------|
| Packaging Site: | Paris Mfg Ctr & DC |



Phillipsburg, NJ 9001:2008, 14001:2004 Paris, KY 9001:2008 Mexico City, Mexico 9001:2008 Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003 Gliwice, Poland 9001:2008, 17025:2005 Selangor, Malaysia 9001:2008 Dehradun, India, 9001:2008, 14001:2004, 13485:2003 Mumbai, India, 9001:2008, 17025:2005 Panoli, India 9001:2008

Nel M Sal

Richard M Siberski Global Director of Quality Assurance

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600 Avantor ™ Performance Materials Inc.

3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610